

Carbios

Key developments and partnerships expected

We expect further progress from Carbios in 2020, with the start of construction of its PET demonstration plant and the commercial launch of Evanesto by Carbiolice. Following the FY19 rights issue, raising €13.8m (net), Carbios enters 2020 in a sound financial position, with sufficient resources to finance the business over the next 12 months. Our DCF valuation remains c €13/share.

Year end	Revenue (€m)	PBT* (€m)	EPS* (€)	DPS (€)	P/E (x)	Yield (%)
12/18	1.1	(4.3)	(0.67)	0.0	N/A	N/A
12/19	1.5	(4.6)	(0.65)	0.0	N/A	N/A
12/20e	1.7	(6.7)	(0.80)	0.0	N/A	N/A
12/21e	1.5	(7.1)	(0.84)	0.0	N/A	N/A

Note: *PBT and EPS are reported.

FY19 results meet expectations

FY19 results from Carbios were broadly in line with our expectations – slightly ahead at the operating level, slightly below at the bottom line. Revenue of €1.45m exceeded our forecast of €1.22m, despite lower than anticipated research service revenues from Carbiolice, which were more than offset by grants received from ADEME. In addition to higher than expected revenue, Carbios posted a lower than forecast operating loss of €4.54m (versus our forecasts of €4.63m), leading to a loss before tax of €4.56m, versus our forecast loss of €4.79m. However, a smaller than anticipated research tax credit of €0.80m (forecast of €1.34m) led to a slightly higher net loss of €3.75m versus our forecast of €3.45m.

Carbios enters FY20 on a sound footing

Carbios began 2020 in a strong financial position, with a net cash balance of €15.92m. Carbios will utilise its cash resources as it incurs costs related to the construction of its PET demonstration plant. Despite the projected rise in capex, Carbios believes it has sufficient cash resources to pursue current developments 'beyond the next twelve months'. Although COVID-19 related uncertainty clouds the outlook, Carbios is not exposed to discretionary consumer expenditure and is expected to generate only a small amount of commercial revenue in FY20. In addition to strengthening its financial position in FY19, Carbios expanded the consortium it had originally founded with L'Oréal to bring its plastic recycling technology to the market to include Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe. During FY19 Carbios was granted new patents in Europe, the US and Japan, and post the year end signed an agreement with Novozymes, which guarantees the production of Carbios's proprietary PET-degrading enzymes.

Valuation: DCF valuation remains €13/share

We have lowered our forecasts for FY20 to reflect higher costs associated with the PET demonstration plant but have made no significant revisions to our longer-term assumptions. Our DCF valuation remains unchanged at €13/share.

Outlook for the year

Industrial support services

27 March 2020

Price €7.10

Market cap €49m

Net cash (€m) at 31 December 2019 15.9

Shares in issue 6.9m

Free float 84%

Code ALCRB

Primary exchange Euronext Growth

Secondary exchange N/A

Share price performance



% 1m 3m 12m

Abs (12.3) (23.8) (10.0)

Rel (local) 10.9 1.3 5.9

52-week high/low €9.9 €5.8

Business description

Carbios develops enzyme-based industrial processes for recycling and biodegradation of plastics, with the long-term aim of displacing current recycling and production processes.

Next events

AGM 18 June 2020

H1 results 21 September 2020

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Commercial revenues to commence in FY20

Significant advances made in FY19

Carbios made notable scientific, commercial and financial advances in FY19. In April Carbios announced that Nestlé Waters, PepsiCo and Suntory Beverage & Food Europe had joined the consortium it had originally founded with L'Oréal, to bring its plastic recycling technology to the market on an industrial scale. During the year Carbios was also granted new patents in Europe, the US and Japan, and now holds six patents that protect its recycling process and a further seven related to PET-degrading enzymes. In June Carbios raised €14.5m via an equity raise and in December announced that it had received €1.4m from ADEME from the Investment for The Future Program (PIA) following the achievement of a key milestone of its CE-PET project.

Post balance sheet events

Additional advances were also made post the year end, most notably the signing of an agreement with Novozymes that guarantees the production of Carbios's proprietary PET-degrading enzymes at both a demonstration level and on an industrial scale. Novozymes already supplies Carbiolice, a subsidiary of Carbios, with enzymes for its industrial processes. Carbios is also seeking to bolster its relationship with its French academic partners and recently (see Exhibit 1, 17 January 2020) entered a strategic alliance with INSA Toulouse through the Toulouse Biotechnology Institute (TBI), a mixed research unit involving INSA Toulouse, INRA and CNRS. Together, Carbios and TBI established a research centre for enzymatic engineering focused on plastic recycling and biosynthesis.

Exhibit 1: Post balance sheet announcements

Date	Comment
17 January 2020	Strategic alliance with National Institute of Applied Science (INSA)
30 January 2020	Joint Development Agreement signed with Novozymes
6 March 2020	Carbios joins European Plastics Pact

Source: Carbios, Edison Investment Research

COVID-19 and other expected developments in FY20

We expect Carbios to begin construction of its PET demonstration plant in H220 (see below) and for Carbiolice to start generating commercial revenues during the year. We also expect Carbios will attempt to strengthen its position in the PET recycling market by forging partnerships with collectors and producers of plastic.

In response to the COVID-19 virus, Carbios has focused primarily on the safety of its staff, with over 80% now working from home and R&D activities suspended. Carbios is not directly exposed to discretionary consumer expenditure and receives a significant proportion of its revenue in the form of grants and loans, so its revenue stream appears relatively resilient. Construction has yet to start on its PET demonstration plant and this constitutes the most significant capital expenditure-related risk. We think the secular trend towards the minimisation of plastic waste is well established and will survive the current pandemic. Although Carbios has sufficient cash to fund its operations for the next 12 months, a prolonged slump in global equity markets would make raising fresh equity more challenging.

Forecast changes

Following the publication of the FY19 results we have updated our forecasts for FY20 and introduce numbers for FY21. The principal change to our forecasts is an assumption of a higher cost base as

Carbios begins to construct and operate its PET demonstration plant. Our longer-term assumptions remain broadly unchanged.

Exhibit 2: Principal changes to 2020 forecasts

	EPS (€)			PBT (€m)			EBITDA (€m)		
	Old	New	% chg.	Old	New	% chg.	Old	New	% chg.
2020e	(0.42)	(0.80)	90%	(4.0)	(6.7)	68%	(3.6)	(6.4)	78%
2021e	N/A	(0.84)	N/A	N/A	(7.1)	N/A	N/A	(6.8)	N/A

Source: Edison Investment Research

Exhibit 3: Financial summary

	€m	2014	2015	2016	2017	2018	2019	2020e	2021e
Year end December 31st		IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS	IFRS
INCOME STATEMENT									
Revenue		0.66	0.84	8.87	0.98	1.08	1.45	1.66	1.48
Operating Expenses		(3.95)	(4.73)	(5.11)	(5.39)	(5.02)	(5.74)	(8.04)	(8.24)
EBITDA (norm)		(3.28)	(3.90)	3.76	(4.41)	(3.94)	(4.29)	(6.38)	(6.76)
Depreciation		(0.08)	(0.17)	(0.21)	(0.24)	(0.30)	(0.25)	(0.25)	(0.26)
Reported Operating Profit		(3.36)	(4.06)	3.55	(4.65)	(4.24)	(4.54)	(6.63)	(7.02)
Net Interest		0.05	0.08	0.08	0.02	(0.03)	(0.03)	(0.04)	(0.05)
Profit before tax (reported)		(3.32)	(3.98)	3.63	(4.63)	(4.26)	(4.56)	(6.68)	(7.07)
Reported tax		1.09	0.94	1.32	0.70	1.19	0.80	1.17	1.24
Profit after tax (reported)		(2.23)	(3.05)	4.95	(3.93)	(3.07)	(3.76)	(5.51)	(5.83)
Extraordinary gain or loss		0.02	(0.02)	(0.03)	(0.01)	(0.04)	0.02	0.00	0.00
Net income (reported)		(2.21)	(3.07)	4.92	(3.94)	(3.11)	(3.75)	(5.51)	(5.83)
Basic average number of shares outstanding (m)		3.75	3.78	3.85	4.57	4.62	5.78	6.90	6.90
EPS - basic reported (€)		(0.59)	(0.81)	1.28	(0.86)	(0.67)	(0.65)	(0.80)	(0.84)
Dividend (c)		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Revenue growth (%)		-26.2%	26.1%	959.7%	-88.9%	10.2%	33.9%	14.3%	-10.5%
Normalised EBITDA Margin (%)		N/A	N/A	42.4%	N/A	N/A	N/A	N/A	N/A
Normalised operating Margin (%)		N/A	N/A	40.0%	N/A	N/A	N/A	N/A	N/A
BALANCE SHEET									
Total Current Liabilities		0.67	0.91	1.17	2.26	3.40	6.13	8.90	8.90
Accounts payable		0.20	0.34	0.49	1.43	1.06	1.39	2.17	2.17
Other current liabilities		0.47	0.57	0.67	0.83	2.34	4.74	6.74	6.74
Total Non-Current Liabilities		1.95	3.01	3.15	3.71	3.71	4.25	9.25	14.25
Debt/Repayable advances		1.95	3.01	3.15	3.71	3.71	4.25	9.25	14.25
Total Liabilities		2.62	3.92	4.32	5.97	7.11	10.38	18.15	23.15
Total Shareholders' Equity		11.12	8.13	13.11	14.55	12.04	22.00	16.50	10.67
Common stock/Capital		2.63	2.65	2.68	3.20	3.26	4.83	4.83	4.83
Additional paid-in capital/Share premium		13.65	13.70	13.74	18.59	19.13	31.28	31.28	31.28
Retained earnings		(2.96)	(5.17)	(8.24)	(3.32)	(7.26)	(10.37)	(14.12)	(19.62)
Other reserves and surplus		(2.21)	(3.05)	4.94	(3.94)	(3.10)	(3.74)	(5.49)	(5.82)
Total liabilities and equity		13.73	12.04	17.44	20.52	19.15	32.39	34.65	33.82
Total assets		13.73	12.04	17.44	20.52	19.15	32.39	34.65	33.82
Total current assets		12.64	10.38	6.16	9.17	6.69	17.09	9.46	8.02
Cash and cash equivalents		11.10	9.01	3.99	7.55	5.15	15.92	8.22	6.82
Accounts receivable		1.40	1.22	1.95	1.46	1.48	1.07	1.13	1.07
Inventories		0.02	0.01	0.02	0.01	0.02	0.02	0.03	0.03
Prepaid expenses		0.12	0.13	0.22	0.15	0.04	0.09	0.09	0.09
Total Non-Current Assets		1.09	1.67	11.28	11.35	12.46	15.30	25.19	25.80
Property Plant and equipment, net		0.74	1.25	1.21	1.11	0.97	2.42	9.90	10.39
Other intangible assets		0.13	0.23	0.37	0.57	0.69	0.86	0.96	1.09
Other non-current assets		0.22	0.19	9.70	9.68	10.80	12.03	14.33	14.33
CASH FLOW									
Cash Flow from Operations									
Net income (loss)		(2.21)	(3.07)	4.92	(3.94)	(3.11)	(3.749)	(5.51)	(5.83)
Depreciation and Amortization		0.07	0.17	0.22	0.23	0.33	0.325	0.25	0.26
Other items		(1.36)	0.39	(0.51)	1.49	(0.29)	0.995	2.70	0.05
Cash Flow from Operations		(3.50)	(2.52)	4.64	(2.22)	(3.08)	(2.429)	(2.56)	(5.52)
Cash Flow from Investing									
Purchases of fixed assets		(0.85)	(0.79)	(0.30)	(0.33)	(0.30)	(3.772)	(7.84)	(0.87)
Other Investing Activities		(0.02)	0.00	(9.53)	0.02	(1.14)	0.759	(2.30)	0.00
Cash Flow from Investing		(0.87)	(0.79)	(9.83)	(0.31)	(1.44)	(3.013)	(10.14)	(0.87)
Cash Flow from Financing									
Change in Debt		0.15	0.07	(0.04)	(0.05)	1.52	2.423	5.00	5.00
Change in Capital Stock		0.17	0.06	0.07	5.38	0.60	13.786	0.00	0.00
Other Financing Activities		0.55	1.08	0.14	0.77	0.00	0.000	0.00	0.00
Cash Flow From Financing		0.87	1.22	0.17	6.09	2.12	16.209	5.00	5.00
Net Changes in Cash and Cash Equivalent		(3.50)	(2.09)	(5.02)	3.56	(2.40)	10.77	(7.70)	(1.39)
Effect of Exchange Rates On Cash		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash and Cash Equivalents - Beginning		14.60	11.10	9.01	3.99	7.55	5.15	15.92	8.22
Cash and Cash Equivalents - End		11.10	9.01	3.99	7.55	5.15	15.92	8.22	6.82

Source: Company accounts, Edison Investment Research. Note: Carbios has reported only P&L, balance sheet and abbreviated cash flow figures for FY19. Some of the FY19 cash flow figures therefore remain our estimates.

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